

Date: Wednesday, 01/10/2008 4:23:35 PM  
 User: Julie Lecocq

## Process Sheet

<b>Customer</b> :	CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> :	OH-58 AFT X-TUBE ASSEMBLY
<b>Job Number</b> :	42379		
<b>Estimate Number</b> :	13214		
<b>P.O. Number</b> :		<b>Part Number</b> :	D058676201TRN
<b>This Issue</b> :	01/10/2008	<b>Drawing Number</b> :	D058-676-241 <i>UR</i> <i>08.10.02</i>
<b>Prsht Rev.</b> :	NC	<b>Project Number</b> :	N/A
<b>First Issue</b> :	1/1	<b>Drawing Revision</b> :	A2
<b>Previous Run</b> :	42378	<b>Material</b> :	
<b>Written By</b> :		<b>Due Date</b> :	08/10/2008
<b>Checked &amp; Approved By</b> :	<i>JLD 08.10.01</i>	<b>Qty:</b>	1 Um: Each
<b>Comment</b> :	Est Rev:A 08-03-06 new issue DD verified by:ec Est Rev B 08.04.02 Removed polish EC verified by: DD		

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
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1.0	D6007106	Crosstube, OH58
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**Comment:** Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D6007-106 Crosstube *538337*

Check OD = 2.250"; ID = 1.550"

*am 08.10.02 ①*

2.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE
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**Comment:** MORI SEIKI CNC LATHE LARGE

1-Fill tube with sand &amp; install plugs DT8534 on both ends as per Folio FA086

2-Turn first side as per Folio FA086

3-File down transition lines smooth.

*am 08.10.02 ①*

3.0	QC1	INSPECT ALL DIM TO DIM SHEET
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**Comment:** INSPECT ALL DIM TO DIM SHEET*am 08.10.02 ①*

4.0	MORI SEIKI	MORI SEIKI CNC LATHE LARGE
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**Comment:** MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA086

2-File down transition lines smooth.

3-Remove sand and plugs

*am 08.10.02 ①*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Wednesday, 01/10/2008 4:23:35 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: OH-58 AFT X-TUBE ASSEMBLY

Job Number: 42379

Part Number: D058676201TRN

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

*AwM 08-10-02*

6.0

QC8

SECOND CHECK



Comment: SECOND CHECK

*AwM 8-10-03*

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1 within 24 hours of machining

*AwM 8-10-03*

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION *DM 8-10-03*

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and stock in kanban rack

Location: *X-TUBE CELL* *AwM 8-10-03*

10.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

*08/10/03*

Job Completion



*mf 08-10-03*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 42379
<b>Description:</b> Crosstube Assembly (OH-58 High Aft)		<b>Part Number:</b> D058-676-241
<b>Inspection Dwg:</b> D058-676-241 <b>Rev:</b> A2		<b>Page 1 of 1</b>

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.240	+0.005/-0.000	2.245	/		
	1.870	+0.005/-0.000	1.875	/		
	1.956	+0.005/-0.000	1.961	/		
	2.045	+0.005/-0.000	2.050	/		
	2.093	+0.005/-0.000	2.098	/		
	2.140	+0.005/-0.000	2.145	/		
	2.188	+0.005/-0.000	2.193	/		
	2.228	+0.005/-0.000	2.233	/		
	0.186	+0.005/-0.000	0.186	/		
	0.500	+0.005/-0.000	0.500	/		
	R0.063	+0.005/-0.000	R0.063	/		
	R0.500	+0.005/-0.000	R0.500	/		
SIDE B	103.51	+0.005/-0.000	103.510	/		
	2.240	+0.005/-0.000	2.245	/		
	1.870	+0.005/-0.000	1.875	/		
	1.956	+0.005/-0.000	1.961	/		
	2.045	+0.005/-0.000	2.050	/		
	2.093	+0.005/-0.000	2.098	/		
	2.140	+0.005/-0.000	2.145	/		
	2.188	+0.005/-0.000	2.193	/		
	2.228	+0.005/-0.000	2.233	/		
	0.186	+0.005/-0.000	0.186	/		
	0.500	+0.005/-0.000	0.500	/		
	R0.063	+0.005/-0.000	R0.063	/		
	R0.500	+0.005/-0.000	R0.500	/		

<b>Measured by:</b> a.m	<b>Audited by:</b> AWM	<b>Prototype Approval:</b> N/A
<b>Date:</b> 08.10.02	<b>Date:</b> 8-10-03	<b>Date:</b> N/A

Rev	Date	Change	Revised by	Approved
A	05.04.27	New Issue (P/O D058-676-201)	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>CP</i>	APPROVED <i>CP</i>	DRAWING NO. D058-676-241	REV. A SHEET 1 OF 3
DATE 00.11.17		TITLE CROSSTUBE ASS'Y (OH-58 HIGH AFT)	SCALE NTS
A	00.11.17	NEW ISSUE	

Qty	Part Number	Description
X	D058-676-241	CROSSTUBE ASSEMBLY (OH-58 HIGH AFT)
1	D6007-106	CROSSTUBE
2	D2856-400-694	ABRASION STRIP
2	D2891-1	SUPPORT
4	MS21920-20	CLAMP

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) MATERIAL: MANUFACTURED FROM D6007-106  
FINISHED LENGTH = 103.51±0.020
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE.
- 5) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 6) MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 7) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 8) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 9) INSTALL D2856-400-694 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2891-1 SUPPORT, PER QSI 035.
- 10) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 11) SEAL EDGES OF SUPPORTS AND ABRASION STRIP USING SIKAFLEX-241/291 SEALANT.
- 12) TORQUE CLAMPS 80 TO 100 IN-LB.

*PH 06.10.02*  
**UNDER REVIEW**  
*06.10.18 PH*  
*Update View 0-0*

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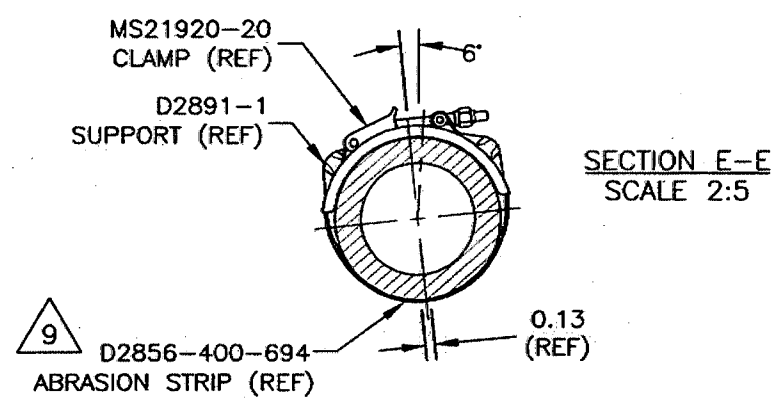
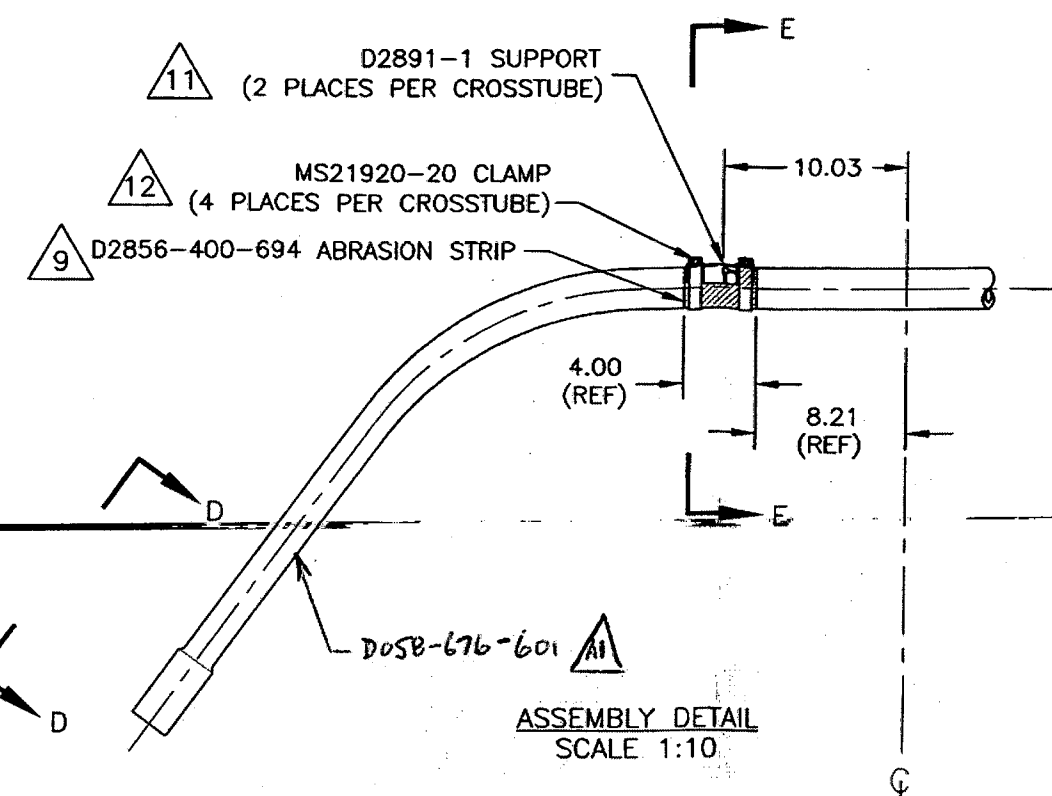
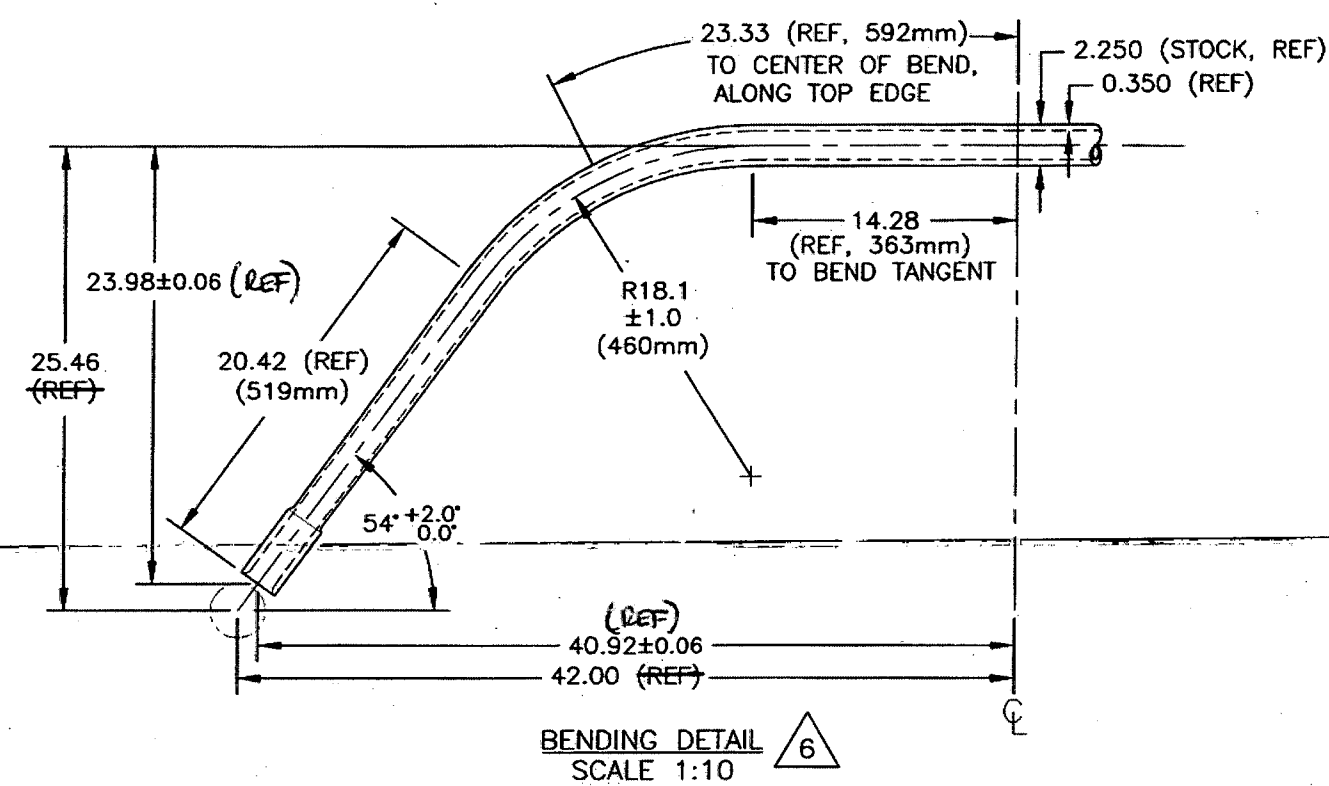
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*00.11.24*

A2	01.07.16	UPDATE DIM TO FIRST HOLE	<i>CP</i>
A1	01.03.07	ADD D058-676-601 P/N	<i>CP</i>

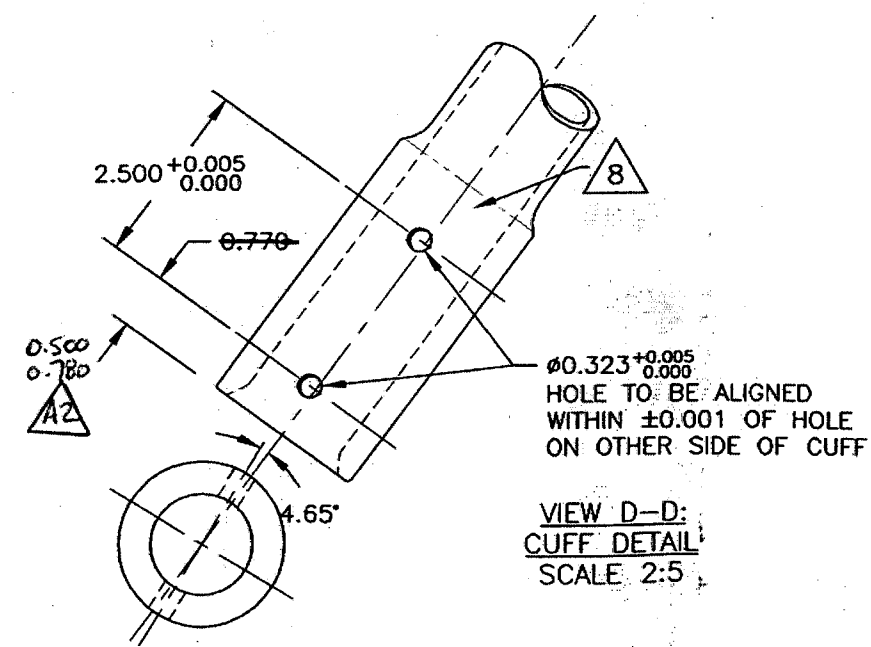
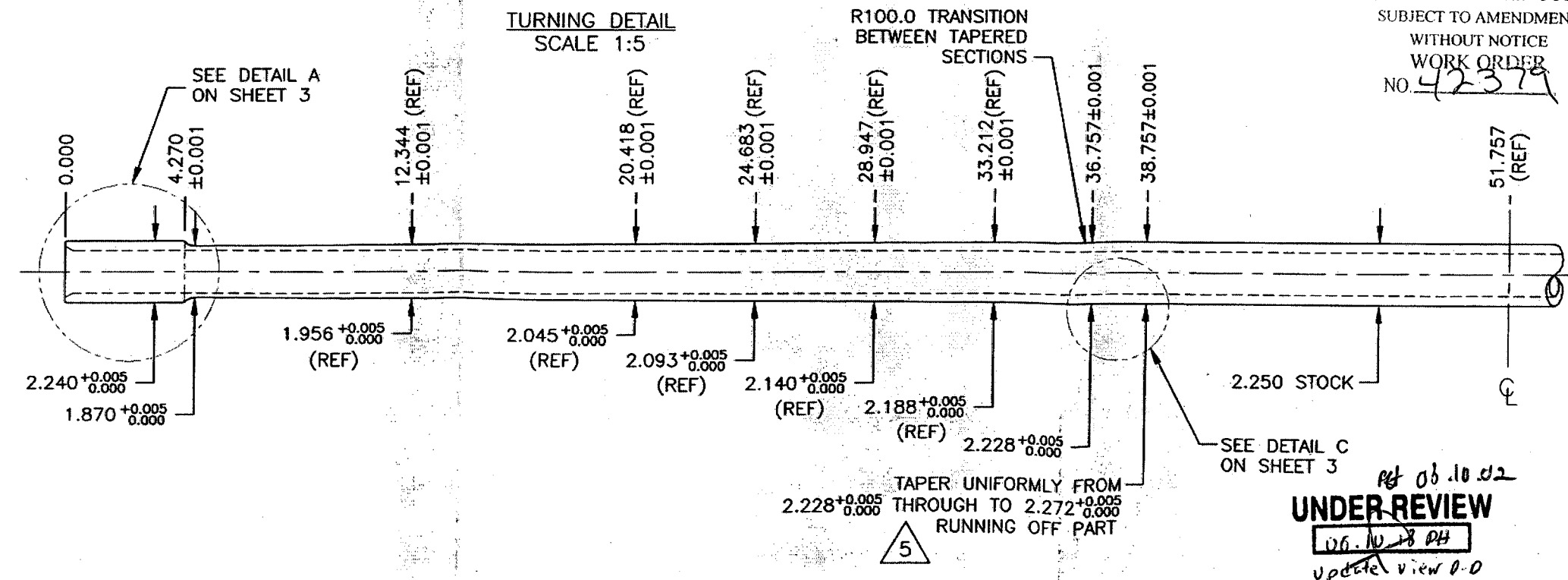
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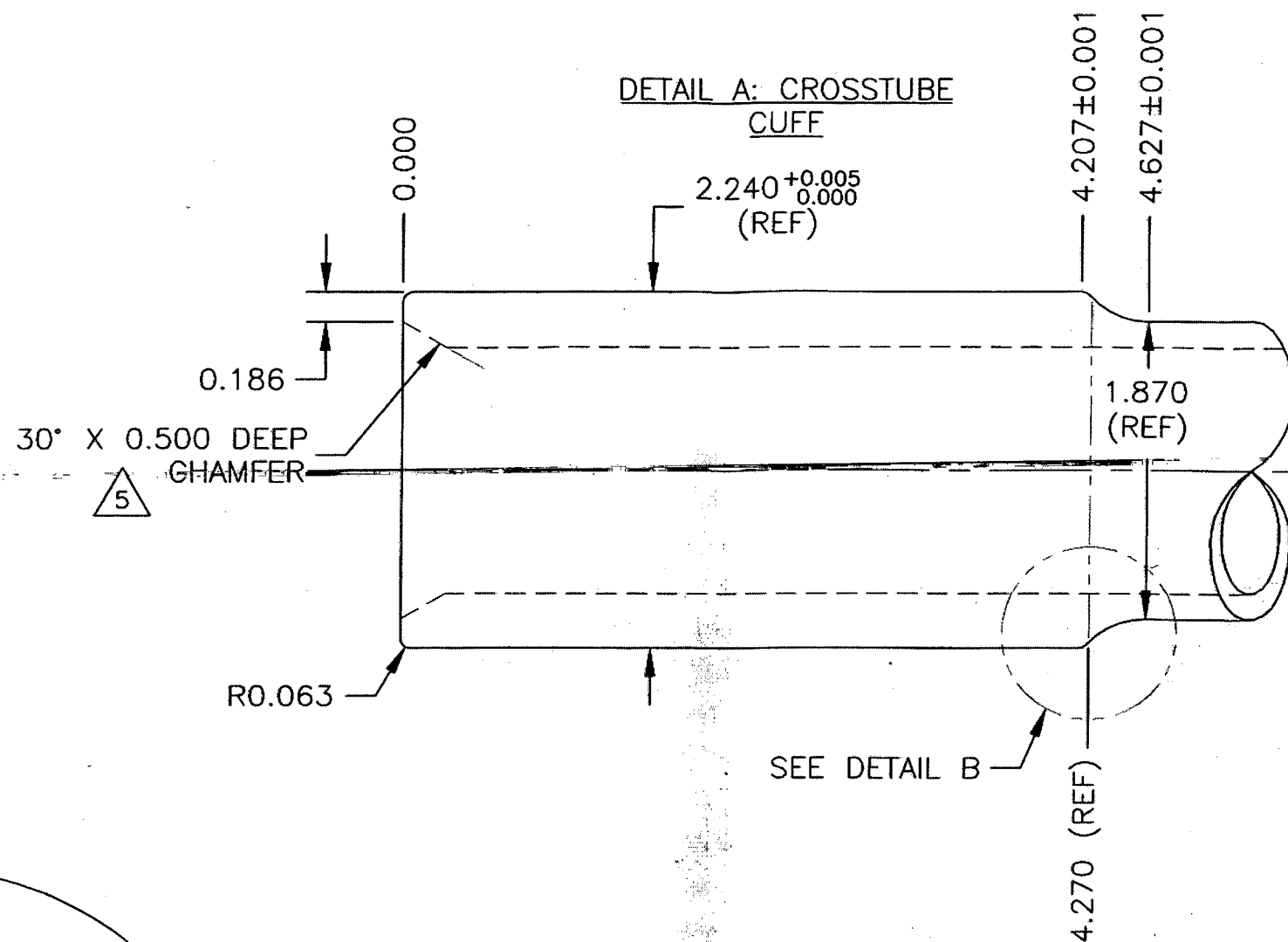
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06.10.12  
update view D-D

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		DATE 00.11.17	TITLE CROSSTUBE ASS'Y (OH-58 HIGH AFT)			SCALE 1:10

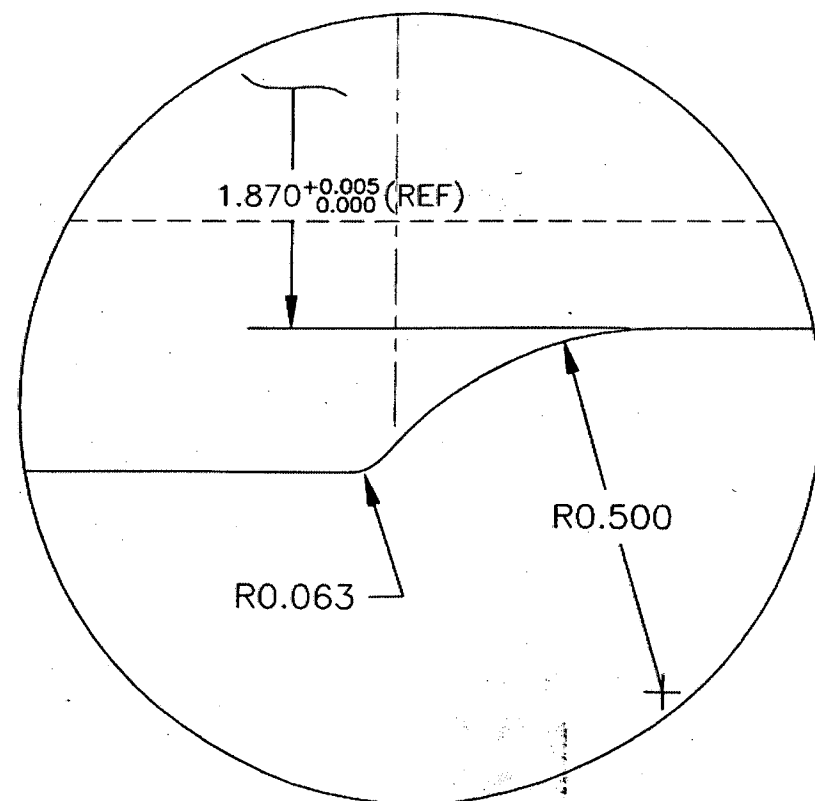




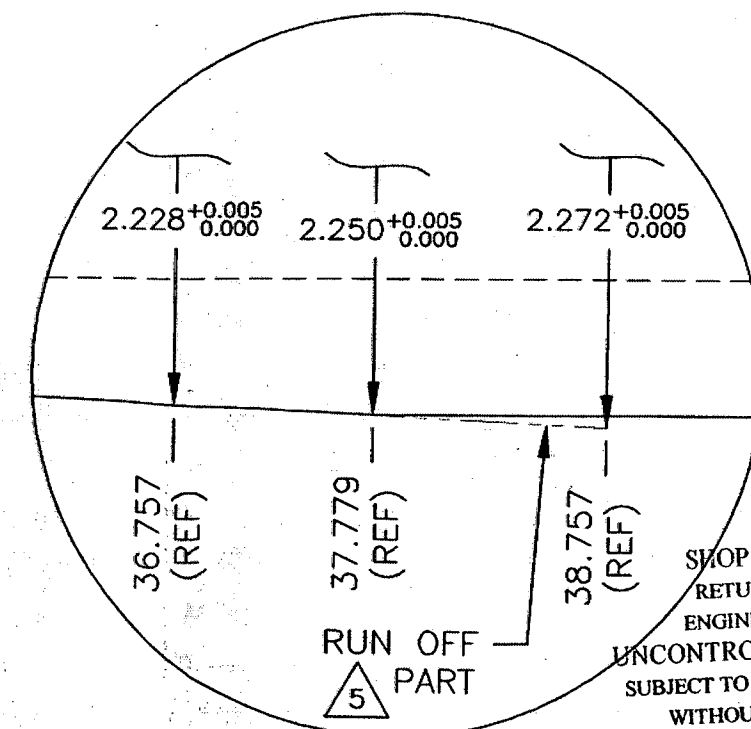
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D058-676-241

REV. A

SHEET 3 OF 3

DATE

00.11.17

TITLE

CROSSTUBE ASS'Y (OH-58 HIGH AFT)

SCALE

1:1

